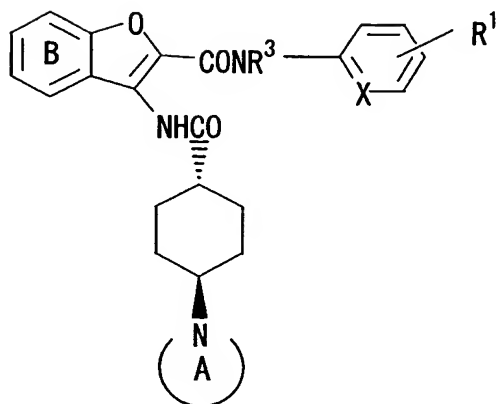


CLAIMS

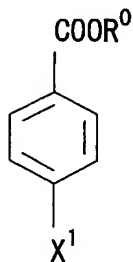
1. A process for preparing a compound of the formula [1]:



wherein X is a group of the formula: -N= or -CH=; R¹ is a hydrogen atom, a halogen atom, a lower alkyl group, a lower alkoxy group, a cyano group or an amino group optionally substituted by a lower alkyl group; Ring A is a nitrogen-containing heterocyclic group; Ring B is an optionally substituted benzene ring or an optionally substituted pyridine ring; and R³ is a hydrogen atom or a lower alkyl group, or a salt thereof, which comprises:

(A)

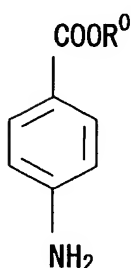
- 1)-a) reacting a compound of the formula [II]:



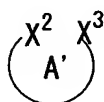
wherein R⁰ is a hydrogen atom or a lower alkyl group and X¹ is a leaving group with a compound of the formula [III]:



wherein Ring A is a nitrogen-containing heterocyclic group, or
1)-b) reacting a compound of the formula [IV]:

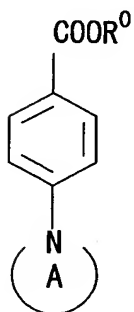


- 5 wherein the symbol is the same as defined above with a compound of the formula [V]:



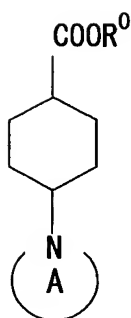
wherein A' is a group derived from a nitrogen-containing heterocyclic group by removing a nitrogen atom, and X^2 and X^3 are leaving groups;

- 10 2) subjecting the resulting compound of the formula [VI]:



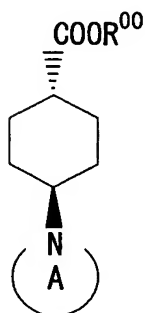
wherein the symbols are the same as defined above to catalytic reduction;

- 3) subjecting the resulting compound of the formula [VII]:



wherein the symbols are the same as defined above to lower-alkyl esterification when COOR^0 is a carboxyl group, followed by isomerization to give a trans-form compound of the formula [VIII]:

5

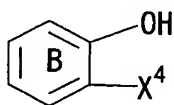


wherein R^{00} is a hydrogen atom or a lower alkyl group and the other symbol is the same as defined above; and separately,

(B)

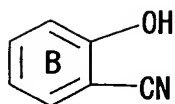
10

1) cyanation of a compound of the formula [IX]:

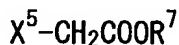


wherein Ring B is an optionally substituted benzene ring or an optionally substituted pyridine ring and X^4 is a leaving group,

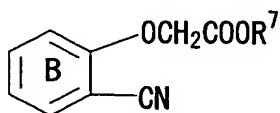
2) reacting the resulting compound of the formula [X]:



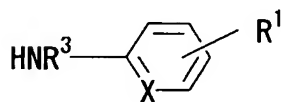
wherein the symbol is the same as defined above with a compound of the formula [XI]:



- 5 wherein R^7 is a hydrogen atom or an ester residue and X^5 is a leaving group, and reacting the resulting compound of the formula [XII]:



wherein the symbols are the same as defined above with a compound of the formula [XIII]:

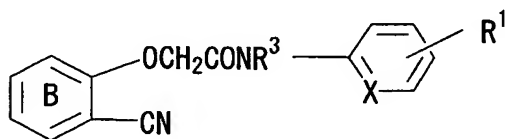


10

wherein R^3 is a hydrogen atom or a lower alkyl group, R^1 is a hydrogen atom, a halogen atom, a lower alkyl group, a lower alkoxy group, a cyano group or an amino group optionally substituted by a lower alkyl group and X is a formula: $-N=$ or $-CH=$, after converting the group R^7 of the compound [XII] to a hydrogen atom, when R^7 is an ester residue,

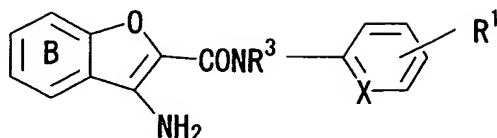
15

- 3) cyclizing the resulting compound of the formula [XIV]:



wherein the symbols are the same as defined above to give a compound of

the formula [XV]:

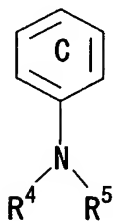


wherein the symbols are the same as defined above; and

(C)

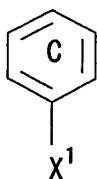
- 5 reacting a compound of the formula [XV] with a compound of the formula [VIII] or a reactive derivative thereof.

2. A process for preparing a compound of the formula [VI]:

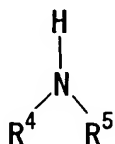


wherein Ring C is an optionally substituted aromatic ring and the formula:

- 10 NR^4R^5 is an optionally substituted amino group or an optionally substituted nitrogen-containing heterocyclic group, which comprises reacting a compound of the formula [II]:



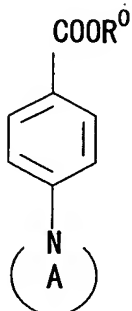
wherein X^1 is a leaving group and other symbol is the same as defined above with a compound of the formula [III]:



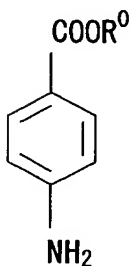
- 15 wherein the symbols are the same as defined above in the presence of a

group VIII metal compound supported by a solid phase.

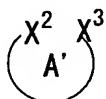
3. A process for preparing a compound of the formula [VI]:



- 5 wherein R^0 is a hydrogen atom or a lower alkyl group and Ring A is a nitrogen-containing heterocyclic group, which comprises reacting a compound of the formula [IV]:



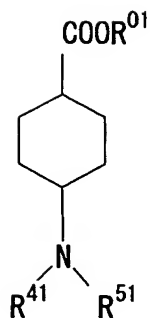
wherein the symbol is the same as defined above with a compound of the formula [V]:



- 10 wherein A' is a group derived from a nitrogen-containing heterocyclic group by removing a nitrogen atom, and X^2 and X^3 are leaving groups.

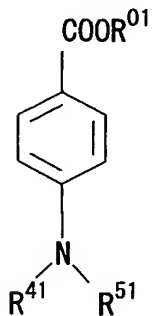
4. A process for preparing a compound of the formula [VII']:

5



wherein R^{01} is a hydrogen atom and the formula: $NR^{41}R^{51}$ is a substituted amino group or a substituted nitrogen-containing heterocyclic group, which comprises subjecting a compound of the formula [VI']:

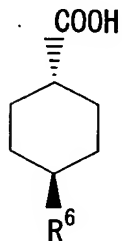
10



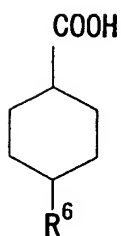
wherein the symbols are the same as defined above to catalytic reduction under low pressure and neutral to slightly basic conditions.

5. A process for preparing a trans-form compound of the formula [VIII']:

15



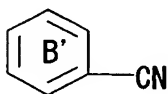
wherein R^6 is a substituent, or a carboxylic acid derivative thereof, which comprises isomerizing a cis-form or a mixture of cis- and trans-forms of a carboxylic acid derivative of the formula [VII']:



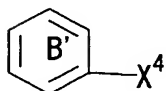
wherein the symbol is the same as defined above in the presence of an alkali metal alkoxide or an alkali metal amide.

6. A process for preparing a compound of the formula [X']:

5



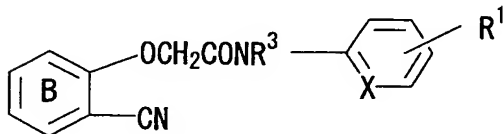
wherein Ring B' is an optionally substituted aromatic ring, which comprises cyanation of a compound of the formula [IX]:



10

wherein X^4 is a leaving group and other symbol is the same as defined above in the presence of a group VIII metal compound supported by a solid phase.

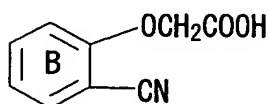
7. A process for preparing a compound of the formula [XIV]:



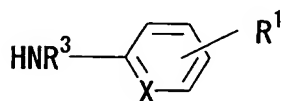
15

wherein Ring B is an optionally substituted benzene ring or an optionally substituted pyridine ring, R^3 is a hydrogen atom or a lower alkyl group, R^1 is a hydrogen atom, a halogen atom, a lower alkyl group, a lower alkoxy group, a cyano group or an amino group optionally substituted by lower

alkyl group and X is a formula: -N= or -CH= from a compound of the formula [XII']:

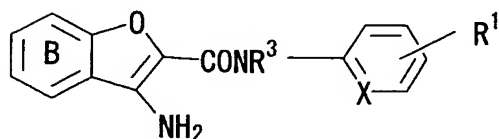


5 wherein the symbol is the same as defined above and a compound of the formula: [XIII]:

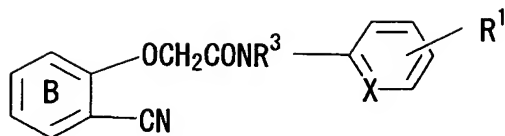


10 wherein the symbols are the same as defined above, which comprises adding a weak base to form a salt of compound [XII'], treating the salt with a halogenating agent to form an acid chloride, and reacting the acid chloride with the compound [XIII].

8. A process for preparing a compound of the formula [XV]:

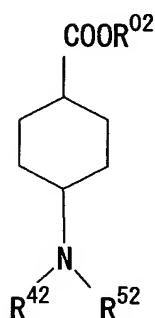


15 wherein Ring B is an optionally substituted benzene ring or an optionally substituted pyridine ring, R³ is a hydrogen atom or a lower alkyl group, R¹ is a hydrogen atom, a halogen atom, a lower alkyl group, a lower alkoxy group, a cyano group or an amino group optionally substituted by lower alkyl group and X is a formula: -N= or -CH=, which comprises cyclizing a compound of the formula [XIV]:

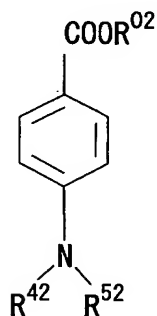


wherein the symbols are the same as defined above.

9. A process for preparing a compound of the formula [VII''']:

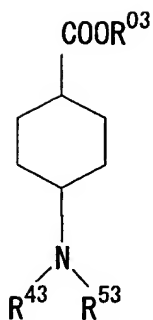


5 wherein R^{02} is a lower alkyl group and the formula: $NR^{42}R^{52}$ is a substituted amino group or a substituted nitrogen-containing heterocyclic group, which comprises subjecting a compound of the formula [VI''']:



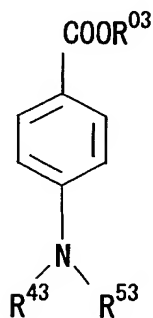
wherein the symbols are the same as defined above to catalytic reduction under low pressure.

10. A process for preparing a compound of the formula [VII''']:



wherein R^{03} is a lower alkyl group and the formula: $\text{NR}^{43}\text{R}^{53}$ is an unsubstituted amino group, which comprises subjecting a compound of the formula [VI''']:

5



10

wherein the symbols are the same as defined above to catalytic reduction under low pressure and neutral to slightly basic conditions.